

Patent Claims

- 660227-2259460
1. Filter element comprising fluid-permeable supporting pipe (10), which is surrounded by a mat filter (12), which in turn is enclosed by a filter casing (16) with openings (18) delimiting a filter chamber (14) and the filter element also has two end caps (20,22), characterized in that the filter casing (16) consists of a plastic casing which is formed from a flat blank, of which the two opposite ends (24,26) are bent toward one another and are joined together securely with one another with formation of the filter chamber (14) by means of a sealing seam (28) produced by heat-sealing, a heating element or an ultrasonic welding method.
 2. Filter element as in Claim 1, characterized in that the mat filter (12) is pleated and is comprised of plastic materials which, with formation of an additional filter fold (32) and with flush arrangement of the mat filter ends (30) on one another, allow these elements to be tightly joined with one another by means of an ultrasonic welding method.
 3. Filter element as in Claim 1 or 2, characterized in that the mat filter (12) folded around the cylinder, and which can be pushed open on the supporting pipe (10), has a larger exterior diameter than the interior diameter of the filter casing (16).
 4. Filter element as in Claim 3, characterized in that the mat filter (12) is brought inward at one of its frontal ends (38) in such a manner that a cone (40) is formed, which facilitates its introduction into the cylindrical filter casing (16).
 - a 5. Filter element as in one of the Claims 1 to 4, characterized in that the mat filter (12) and the filter casing (16) consist of a recyclable plastic material.
 6. Filter element as in Claim 5, characterized in that the two end caps (20,22) consist of a recyclable plastic material.

7. Filter element as in Claim 5 or 6, characterized in that the supporting pipe (10) consists of a recyclable plastic material.
8. Filter element as in one of the Claims 1 to 7, characterized in that the openings (18) in the plastic filter casing (16) are formed by punching out devices, especially by devices having circular cross section.
9. Filter element as in one of the Claims 1 to 8, characterized in that the sealing seam (28) are formed by the intermittent contact points of the ends (24,26) of the filter casing (16) or an overlapping area.

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